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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,499	08/01/2003	Frank Olschewski	21295.59(H5644US)	4405

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EXAMINER	
ROSARIO, DENNIS	
ART UNIT	PAPER NUMBER
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/632,499	OLSCHEWSKI, FRANK	
	Examiner	Art Unit	
	Dennis Rosario	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 August 2003 7/10/07* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/5/09 has been entered. Claims 1-11 are pending.

Response to Arguments

2. Applicant's arguments filed 2/5/09 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "operate on original captured images" on pages 5 and 6 of the remarks; "operate on originally acquired images" on page 6; "original captured images" on 6 and 7; "originate from a capturing device" on 7) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fogg (US Patent 6,466,624 B1) in view of Nybo et al. (US Patent Application Publication No. : US 2001/0052933 A1).

Regarding claim 7, Fogg teaches an arrangement for optimizing the image quality of movable subjects imaged with a microscope system, comprising:

a) at least one objective defining an image window (Fogg does not teach the claimed objective in terms of optics),

b) a detector unit for optically acquiring images each image optically acquired by the detector unit having a plurality of pixels (Fogg does not clearly disclose optically acquiring images), and

c) a computer system (fig. 5,num. 500) comprising:

c1) a means for determining a respective displacement vector field (all of fig. 10C) from a comparison (fig. 10C) of the respective pixels (that are respectively tagged in fig. 8D: 842) of at least two chronologically successive images (fig. 8B:current frame and forward frame) optically acquired by the detector unit (fig. 8B is not clearly optically acquired),

c2) a means for identifying a trajectory (fig. 10c, num. 1026 corresponding to fig. 6, num. 606) for each (tagged) pixel of the images optically acquired by the detector unit (the images of Fogg are not clearly disclosed as optically acquired) from the displacement vector fields (fig. 10c, num. 1021 that has incomplete vector fields as discussed in col. 15, lines 50-65), and

c3) a means for applying an operation (fig. 11F, num. 1054 corresponding to fig. 6, num. 607) to the images optically acquired (the images of Fogg are not clearly disclosed) by the detector unit (Fogg does not clearly disclose the claimed detector unit that optically acquires images) along the identified trajectory (as determined in fig. 6, num. 606),

d) wherein the acquired images (which are not clearly disclosed in Fogg as being optically acquired) are not subjected to compression or decompression (since Fogg teaches an original image, which is not clearly optically acquired, in fig. 1: “s” which is clearly not yet subject to compression or decompression since “s” is the first appearance of an image relative to fig. 1 of coding) prior (as shown in fig. 1 that serves as a general map of events) to the applying of the operation (fig. 11:1054 which corresponds to fig. 1:103).

Fogg does not teach limitations a) and b) that flows through the remaining limitations, but does teach "clues…to the nature of the captured video source [in fig. 1:Video Source] and encoder-based processing [in fig. 1:101] " in col. 12, lines 66 to col. 13, line 1. Thus, Fogg suggests that the video source is not known since clues are needed to determine the nature of the video source and associated encoder-based processing, and the video source and associated encoder-based processing can be anything that provides a video source with encoder-based processing from which clues are to be determined from the combination of the video source and associated encoder.

Nybo teaches such a source with associated encoder processing as shown in fig. 1, num. 112 as the source and fig. 1, num.120 as the encoder that uses "MPEG" in paragraph [0042] and teaches limitations a) and b) that describe features of a microscope known to one of ordinary skill in the art of microscopes as disclosed in Nybo in [0034], last word.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Fogg's teaching of obtaining clues about Nybo's source 112 with encoder 120, because Nybo's source has medical and scientific value.

Regarding claim 8, Fogg discloses the arrangement as defined in claim 7, wherein the means for applying an operation to the images optically acquired by the detector unit along the identified trajectory is chosen from:

a) a deconvolution means,

b) a smoothing means,

c) an averaging filter, or

d) a means for (fig 11F, num. 1118) operation acting in time-lateral (fig. 11F, num. 1054: "…temporally") fashion.

Regarding claim 9, Fogg discloses the arrangement as defined in claim 7, further comprising:

a) a first image memory (fig. 6,num. 601) storing the images optically acquired by the detector unit;

b) a trajectory memory (fig. 5,num. 517) storing trajectory data obtained from the images optically acquired by the detector unit; and

b) a second image memory (fig. 6, upon the output of fig. 6, num. 609: "Storage") storing the images created by the correlation (or "correlate" in col. 18, line 41) of the images from the first image memory with the trajectory data from the trajectory memory (fig. 5,num. 517).

Regarding claim 11, Fogg discloses software on a data medium (fig. 5,num. 507), wherein the software cause a microscope system to carry out a method as defined in claim 1.

Claims 1 and 2 are rejected the same as claims 7 and 8. Thus, argument similar to that presented above for claims 7 and 8 of an arrangement is equally applicable to claims 1 and 2 of a method.

Regarding claim 3, Fogg discloses the method defined in claim 1, wherein

a) the images optically acquired by the detector unit are conveyed to an image memory (fig. 6, num. 601); and

b) data obtained from the images optically acquired by the detector unit is conveyed to an optical flow calculator (fig. 10A, num. 1001 outputs "Optical Flow Metrics" as shown upon the output of fig. 10A, num. 1001), to a trajectory tracker (fig. 10C, num. 1026), and to a trajectory memory (fig. 5, num. 517).

Regarding claim 4, Fogg discloses the method as defined in claim 3, wherein for the application of the operation, the images optically acquired by the detector unit are retrieved from the image memory (via fig. 6,num. 602) and corresponding trajectory data is retrieved from the trajectory memory (fig. 5,num. 517)in a correlated way (or "correlate" in col. 18, line 41).

Regarding claim 5, Fogg discloses the method as defined in claim 4, wherein the data generated by application of the operation is conveyed to a second image memory (fig. 6, upon the output of fig. 6, num. 609: "Storage").

Regarding claim 6, Nybo of the combination teaches the method as defined in claim 1, wherein the microscope system contains a scanning microscope or a conventional microscope ("microscope" in [0034], last word).

a) a conventional microscope (or "microscope" in paragraph [0034], last line).

Claim 10 is rejected the same as claim 6. Thus, argument similar to that presented above for claim 6 of a method is equally applicable to claim 10 of an arrangement.

Allowable Subject Matter

5. The following claim 1 drafted by the examiner and considered to distinguish patentably over the art of record in this application, is presented to applicant for consideration:

a) at least one objective defining an image window,

b) a detector unit for optically acquiring images each image optically acquired by the detector unit having a plurality of pixels, and

c) a computer system comprising:

c1) a means for determining a respective displacement vector field from a comparison of the respective pixels of at least two chronologically successive images optically acquired by the detector unit,

c2) a means for identifying a trajectory for each pixel of the images optically acquired by the detector unit from the displacement vector fields, and

c3) a means for applying an operation to the images optically acquired by the detector unit along the identified trajectory,

d) wherein the acquired images are not subjected to compression or decompression ~~prior to~~ during the applying of the operation.

Note that such an amendment appears to bring the claimed operation closer to the unclaimed original image or the claimed acquired images and farther away from coding, while the current rejection identifies the claimed operation to operate upon a decompressed imaged which clearly does not meet the proposed amendment.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fogel (US Patent 6,008,865) is pertinent under 35 USC 102(b) since Fogel teaches a vector field with trajectories in fig. 2 of pixels from an optical disc and where corresponding pixel trajectories are interpolated to form new image pixels: inter-frame interpolation based on vector trajectory field.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is (571) 272-7397. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dennis Rosario/
Examiner, Art Unit 2624

/Matthew C Bella/
Supervisory Patent Examiner, Art Unit 2624